

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An image processing circuit processing raw image data picked up with an image pickup device, comprising:

means for A/D converting said raw image data;

compression means for compressing digital the raw image data obtained converted by and transferred from said A/D converting means said raw image data;

a buffer part means for temporarily storing compressed data transferred from said compression means;

expansion means for reading said compressed data from said buffer part means for temporarily storing compressed data and expanding the same; and

an image processing part means for executing image processing on expanded data transferred from said expansion means.

Claim 2 (Currently Amended): The image processing circuit according to claim 1, wherein said image pickup device is driven by an interlacing system reading an odd field consisting of only odd lines and an even field consisting of only even lines forming a frame at temporally different timings,

said buffer part means for temporarily storing compressed data stores said compressed data of a first field formed by either said odd field or said even field, and

said means for executing image processing part reads said first field stored in said buffer part means for temporarily storing compressed data in synchronization with entry of a second field formed by remaining said field and executes real-time image processing on said first and second fields.

Claim 3 (Currently Amended): The image processing circuit according to claim 1 or 2, wherein

data transfer between said compression means and said buffer part means for temporarily storing compressed data, and data transfer between said expansion means for expanding and said means for temporarily storing compressed data are controlled by a direct memory access system.

Claim 4 (Currently Amended): The image processing circuit according to claim 1, further comprising:

division means for dividing said digital raw image data into a plurality of blocks and outputting the same to said compression means for compressing, wherein said compression means for compressing and said expansion means for expanding execute compression and expansion in units of said blocks.

Claim 5 (Currently Amended): The image processing circuit according to claim 4, further comprising:

means for detecting a block including previously specified defective pixel data among said expanded data expanded by said expansion means for expanding and outputting a block obtained by correcting said defective pixel data to said compression means for compressing.

Claim 6 (Currently Amended): The image processing circuit according to claim 4, further comprising:

defect inspection/correction means for performing a defect inspection before outputting said expanded data expanded by said expansion means for expanding to said means for executing image processing part for replacing a block having detected defective

pixel data with a normal block and outputting the same to said ~~compression~~ means for compressing.

Claim 7 (Currently Amended): The image processing circuit according to any of claims 4 to 6, wherein

said ~~division~~ means for dividing divides said digital image data into a plurality of blocks in units of lines.

Claim 8 (Currently Amended): The image processing circuit according to claim 1 or 2, further comprising:

~~difference calculation means for calculating~~ the difference between pixel values of said digital raw image data and outputting said difference to said ~~compression~~ means for compressing before compressing said digital raw image data in said compression means.

Claim 9 (Currently Amended): The image processing circuit according to claim 8, wherein

said ~~difference calculation means for calculating~~ calculates the difference between the values of pixels adjacent to each other along ~~the a~~ time base.

Claim 10 (Currently Amended): The image processing circuit according to claim 8, wherein

said ~~difference calculation means for calculating~~ calculates the difference between the values of alternate pixels along ~~the a~~ time base.

Claim 11 (Currently Amended): The image processing circuit according to claim 8, wherein

said ~~difference calculation means~~ for calculating calculates the difference between the values of vertically adjacent two pixels of two lines of said digital raw image data.

Claim 12 (Currently Amended): The image processing circuit according to claim 8, wherein

said ~~difference calculation means~~ for calculating calculates the difference between the values of vertically adjacent two pixels of alternate lines of said digital raw image data.

Claim 13 (Currently Amended): The image processing circuit according to claim 8, wherein

said ~~difference calculation means~~ for calculating, which calculates the difference between the values of vertically adjacent two pixels of alternate lines or two lines of said raw image data, ~~according to either claim 11 or claim 12~~ is selected in response to the a driving system for said image pickup device.

Claim 14 (New): A method for processing raw image data picked up with an image pickup device, comprising the steps of:

A/D converting said raw image data;
compressing the raw image data converted in said A/D converting step;
temporarily storing compressed data compressed in said compression step;
reading said compressed data from storage;
expanding said compressed data read from storage; and
executing image processing on expanded data expanded in said expanding step.

Claim 15 (New): An image processing apparatus for processing raw image data picked up with an image pickup device, comprising:

- an A/D converter configured to A/D convert said raw image data;
- a compressor configured to compress the raw image data converted by and transferred from said A/D converter;
- a buffer configured to temporarily store compressed data transferred from said compressor;
- an expander configured to read said compressed data from said buffer and expanding the same; and
- an image processor configured to execute image processing on expanded data transferred from said expander.